

### Abstract

A cement producing system includes a rotary kiln, a riser duct having lower portion communicably connected to the rotary kiln to pass process materials thereto, and  
5 a down draft calciner having a lower portion communicably connected to the lower portion of the riser duct. A tertiary duct is communicably connected to an upper portion of the down draft calciner to receive heated tertiary gas therefrom and a suspension burner is operably disposed in the down draft calciner in a manner to permit receipt of combustible waste and suspension of the waste therein for combustion thereof. A method  
10 of producing cement using the burner in the down draft calciner is also provided.